STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

Mr. Brian Ahern
Plant Manager
Casco Bay Energy Company, LLC
125 Shore Road
Veazie, ME 04401

March 9, 2006

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0036188
Maine Waste Discharge License (WDL) Application #W008016-50-D-R
Maine Independence Station - Veazie
Final Permit/License

Dear Mr. Ahern:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMR) may not reflect the revisions in this permitting action for several months. However, you are required to report applicable test results for parameters required by this permitting action that do not appear on the DMR. Please see the attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding this matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: Tanya Hovell, DEP/EMRO
Sandy Lao, USEPA

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

DMR Lag

(reprinted from April 2003 O&M Newsletter)

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months. This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.

2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.

3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

   EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

CASCO BAY ENERGY COMPANY LLC	)	MAINE POLLUTANT DISCHARGE
VEAZIE, PENOBSCOT COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
ELECTRICAL GENERATING STATION	)	AND
ME0036188	)	WASTE DISCHARGE LICENSE
W008016-50-D-R **APPROVAL**	)	**MODIFICATION/RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et seq. and Maine Law, 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of CASCO BAY ENERGY COMPANY, L.L.C. (CBEC hereinafter) with its supportive data, agency review comments, and other related materials on file, and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The applicant has applied to the Department for modification and renewal of its combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0036188/Maine Waste Discharge License (WDL) #W008016-50-C-R (permit hereinafter), which was issued on November 12, 2003 and is due to expire on November 12, 2008. The permit approved the discharge of 1.96 million gallons per day (MGD) of miscellaneous waste waters including 0.530 million gallons per day (MGD) of sand filter backwash, 0.018 MGD of demineralization system ion exchange regeneration water, and 1.41 MGD of cooling water blowdown which includes 0.091 MGD of boiler blowdown from a combined cycle natural gas-fired electrical generating facility known as the Maine Independence Station (MIS) to the Penobscot River, Class B, in Veazie, Maine.

MODIFICATIONS REQUESTED

The permitte has stated in their 11/2/05 application, "This application is being submitted as a modification to MIS' existing WDL/MEPDES permit to combine stormwater discharges associated with industrial activities, from three outfalls (Outfalls 2, 3, and 4), that are currently permitted under EPA's Multi-Sector General Permit (MSGP). Once MIS receives approval by the State of Maine to combine those stormwater discharges with it's existing WDL/MPDES Permit, MIS will terminate its coverage under EPA's MSGP."

PERMIT SUMMARY

This permitting action carries forward all the terms and conditions of the 11/12/03 permitting action (with the exception of limitations and monitoring requirements for copper) and authorizing the discharge of storm water runoff from three outfalls.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated January 23, 2006, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A., Section 464(4)(F), will be met, in that:

   a. Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   b. Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   c. The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   d. Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   e. Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of CASCO BAY ENERGY COMPANY LLC. to discharge cooling tower blowdown, boiler blowdown, sand filter backwash, demineralization system ion exchange regeneration water, cooling tower cleaning wastes and storm water runoff associated with industrial activities from its combined cycle electrical generating station known as Maine Independence Station to the Penobscot River, Class B, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations, including:

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. This permit expires five (5) years from the date of signature below.

DONE AND DATE AT AUGUSTA, MAINE, THIS 8TH DAY OF MARCH 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
David ~~Littell, Commissioner~~

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt to application: November 2, 2005.

Date of application acceptance: November 2, 2005.

FILED
MAR - 9 2006
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection _____

This order prepared by Gregg Wood, BUREAU OF LAND AND WATER QUALITY

W80165OD 2/7/06

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORINGREQUIREMENTS

1. During the period beginning effective date of this permit modification and lasting through permit expiration, the permittee is authorized to discharge **cooling tower blowdown, boiler blowdown, demineralization system ion exchange regeneration waters and sand filter backwash** from **Outfall #001B** to the Penobscot River. The discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow [50050]	---	1.96 MGD [03]	---		Continuous [99/99]	Measure [MS]
Temperature, ^{O}F [00011]	---	---	---	100^{O}F [15]	Continuous [99/99]	Measure [MS]
Free Available Chlorine(1) [50064]	---	---	0.2 mg/L [19]	0.5 mg/L [19]	1/Month [01/30]	Grab [GR]
Total Suspended Solids [00530]	137 lbs/day [26]	457 lbs/day [26]	30 mg/L [19]	100 mg/L [19]	1/Month [01/30]	Grab [GR]
Zinc (total) [01092]	---	12 lbs/day [26]	---	1.0 mg/L [19]	1/Quarter [01/90]	Grab [GR]
Oil and Grease [03582]	---	---	15 mg/L [19]	20 mg/L [19]	1/Quarter [01/90]	Grab [GR]
Chromium (total) [01034]	---	1.04 lbs/day [26]	---	0.2 mg/L [19]	1/Quarter [01/90]	Grab [GR]
pH(2) [00400]	The pH shall be $\geq$ 6.0 and $\leq$ 9.0 at any time.				1/Quarter [01/90]	Grab [GR]

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning the effective date of the permit and lasting through permit expiration, the permittee is authorized to discharge storm water runoff associated with industrial activities from **OUTFALLS #002, #003 and #004** to the Penobscot River.

OUTFALL #002 – Westerly of cooling towers.
OUTFALL #003 – Southwesterly corner of Bangor Hydro's Graham Station – culvert under Shore Road.
OUTFALL #004 – Southeasterly corner of Bangor Hydro's Graham Station – culvert under Shore Road.

See Attachment A of the Fact Sheet attached to this permit for a site location map of the facility.

This permitting action does not establish numeric limitations and or monitoring requirements for these outfalls however, the permittee is required to maintain an up-to-date Storm Water Pollution Prevention Plan (SWPPP). As the site or any operations conducted on it have changed or are expected to change materially or substantially, the permittee shall modify its SWPPP as necessary to include such changes and notify the Department within 90 days of such modifications to the plan. The permittee shall maintain a copy of the SWPPP and any subsequent revisions at the facility and shall make the plan available to Department personnel upon request.

The SWPPP requirements are intended to facilitate a process whereby the permittee thoroughly evaluates potential pollution sources at the terminal and selects and implements appropriate measures to prevent or control the discharge of pollutants in storm water runoff. The process involves the following four steps: (1) formation of a team of qualified facility personnel who will be responsible for preparing the SWPPP and assisting the plant manager in its implementation; (2) assessment of potential storm water pollution sources; (3) selection and implementation of appropriate management practices and controls; and (4) periodic evaluation of the effectiveness of the plan to prevent storm water contamination and comply with the terms and conditions of the permit.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORINGREQUIREMENTS

Sampling Location: With the exception of flow and temperature, sampling for all parameters for Outfall #001B shall be collected prior to the discharge from the weir structure to the receiving waters. Any change in sampling location must be approved by the Department in writing.

Sampling –Sampling and analysis must be conducted in accordance with; a) methods approved in 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

Footnotes:

(1) Free available chlorine may not be discharged for more than two hours in any one day.

(2) The pH of the discharge from Outfall #001B may be outside of the range of 6.0 - 9.0 standard units provided it is not more than 0.5 standard units outside of the background pH of the intake water for the facility at the time of sampling or 0.5 standards units outside the limitation range of 6.0 -9.0 standard units. To determine compliance with this provision, the permittee must sample and document the ambient pH of the intake water if a pH result of the discharge is reported outside of the range limitation of 6.0 - 9.0 standard units.

B. NARRATIVE EFFLUENT LIMITATIONS

1. There shall be no discharge of polychlorinated biphenyl compounds (PCB's) such as those commonly used for transformer fluid.

2. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

3. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

4. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

5. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

SPECIAL CONDITIONS

C. METAL CLEANING WASTES

The chemical metal cleansing wastes generated when cleaning the heat recovery steam generator shall be transported off-site for proper disposal/treatment pursuant to all applicable federal, state, and local laws and regulations.

D. COOLING TOWER CLEANING WASTES

The cooling tower solids shall be removed for drying either on-site or off-site followed by proper disposal off-site pursuant to all applicable federal, state, and local laws and regulations.

E. CHLORINATION

Chlorine or bromine may be used as a biocide. The use of any other biocide requires prior written approval by the Department. The term chlorine or any other form of the word as used in this permit, shall include bromine or the equivalent form of the term bromine.

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following:

1. Any substantial change in the volume or character of pollutants being discharged.

2. For the purposes of this section, adequate notice shall include information on:

   a. The quality or quantity of waste water introduced to the waste water collection and treatment system; and

   b. Any anticipated impact from the change in the quality or quantity of the waste water to be discharged.

G. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfalls 001B, 002, 003 and 004. Discharges of waste water from any other point source are not authorized under this permit, but shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

SPECIAL CONDITIONS

H. MONITORING AND REPORTING

Monitoring results shall be summarized and reported on separate Discharge Monitoring Report Forms provided by the Department at a frequency of 1/Month and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMRs are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the Discharge Monitoring Report and all other reports required herein shall be submitted to the Department assigned compliance inspector (unless otherwise specified) at the following address:

Department of Environmental Protection
Eastern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
106 Hogan Road
Bangor, Maine 04011

I. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of test results required by Special Condition A of this permit, new site specific information or any other test results or information gathered during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

J. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **January 23, 2006**

PERMIT NUMBER: **ME0036188**
LICENSE NUMBER: **W008016-50-D-R**

NAME AND ADDRESS OF APPLICANT:

CASCO BAY ENERGY COMPAY, L.L.C.
Subsidiary of Duke Energy North America
Maine Independence Station

125 Shore Road
Veazie, Maine 04401

COUNTY: **Penobscot County**

NAME AND ADRESS WHERE DISCHARGE OCCURS:

125 Shore Road
Veazie, Maine 04401

RECEIVING WATER/CLASSIFICATION: **Penobscot River/Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Brian Ahern**
Plant Manager
(207) 973-1215

1. APPLICATION SUMMARY

The applicant has applied to the Department for modification and renewal of its combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0036188/Maine Waste Discharge License (WDL) #W008016-50-C-R (permit hereinafter), which was issued on November 12, 2003 and is due to expire on November 12, 2006. The permit approved the discharge of 1.96 million gallons per day (MGD) of miscellaneous waste waters including 0.530 million gallons per day (MGD) of sand filter backwash, 0.018 MGD of demineralization system ion exchange regeneration water, and 1.41 MGD of cooling water blowdown which includes 0.091 MGD of boiler blowdown from the proposed combined cycle natural gas-fired electrical generating facility known as the Maine Independence Station (MIS) to the Penobscot River, Class B, in Veazie, Maine.

2. MODIFICATIONS REQUESTED

The permittee has stated in their 11/2/05 application, "This application is being submitted as a modification to MIS' existing WDL/MEPDES permit to combine stormwater discharges associated with industrial activities, from three outfalls (Outfalls 2, 3, and 4), that are currently permitted under EPA's Multi-Sector General Permit (MSGP). Once MIS receives approval by the State of Maine to combine those stormwater discharges with it's existing WDL/MPDES Permit, MIS will terminate its coverage under EPA's MSGP."

3. PERMIT SUMMARY

a) Terms and conditions - This permitting action carries forward all the terms and conditions of the 11/12/03 permitting action (with the exception of limitations and monitoring requirements for copper) and authorizing the discharge of storm water runoff from three outfalls.

b) History: The most recent relevant regulatory actions include the following:

July 29, 1998 – The U.S. Environmental Protection Agency (EPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0036188 for a five-year term for the then proposed facility.

August 24, 1998 – The Department issued WDL #W008016-50-A-N for a five-year term for the then proposed facility.

March, 2000 – The CBEC's Maine Independence Station commenced operations as an electrical generating station.

January 12, 2001 - The Department received authorization from the EPA to administer the NPDES permit program in Maine. From that point forward, the permitting program has been referred as the MEPDES program. To promote consistency with the NPDES program, the MEPDES permit issued for the Veazie power plant has remained as #ME0036188.

July 13, 2001 – The CBEC submitted an application to the Department to modify WDL #W008016-50-A-N to incorporate the terms and conditions of the MEPDES program.

November 1, 2001 – The Department received a letter from the CBEC authorizing the EPA to retire NPDES permit #ME0036188 last issued by the EPA on August 25, 1998. Upon issuance of a final MEPDES permit, the NPDES was superseded and all terms and conditions of the NPDES became null and void.

December 31, 2001 - The Department issued a combination MEPDES permit modification #ME0036188/WDL #W008016-50-B-M which superseded the NPDES permit.

3. PERMIT SUMMARY (cont'd)

November 12, 2003 - The Department issued a renewal of the MEPDES/WDL for the CBEC facility for a five-year term.

November 2, 2005 – The CBEC submitted an application to the Department to modify and renew the MEPDES/WDL to incorporate the discharge of storm water run-off from three outfalls at the MIS facility.

b. Source Description: CBEC constructed and commenced operation of a state of the art 520 megawatt (MW) nominal capacity, combined cycle, natural gas-fired generating facility, known as Maine Independence Station (MIS), in March of calendar year 2000. The project is located on a 29.5-acre parcel off School Street, adjacent to the Bangor Hydro Electric's former Graham Station. The facility includes these major components:

Turbine generator-building;
Administration and maintenance buildings;
Paved parking areas;
Heat recovery steam generators (HRSGs);
Cooling towers;
Access roads, both gravel and paved;
Water supply intake and discharge structures;
Water treatment facilities; and
Stormwater system.

The facility is operated as a base loaded facility. Process and service waters are drawn from the Penobscot River via the intake and pump house for the former Graham Station. All waste waters from the facility are discharged to the Penobscot River via a pipe for the former Graham Station that measures 48 inches in diameter. Said pipe conveys the waste waters to a weir structure for discharge to the Penobscot River.

Power Plant

Waste streams contributing to the discharge to the river consists of 0.530 MGD of sand filter backwash, 0.018 MGD of demineralization system ion exchange regeneration water, 1.41 MGD of cooling tower blowdown (0.091 MGD of boiler blowdown) for a total of 1.96 MGD. It is noted that the discharges of sand filter backwash waters have never been realized as this system was incorporated into the original design of the facility but was never constructed. The permittee has requested to retain authorization in this permit to discharge this waste water in the event the need arises to construct this system in the future. The 0.108 MGD of demineralization system ion exchange regeneration water and 0.091 MGD of boiler blowdown discharge into the cooling tower combining with the cooling tower blowdown for discharge to the Penobscot River via Outfall #001B.

3. PERMIT SUMMARY (cont'd)

Power Plant

Service waste waters totaling approximately 0.015 MGD from floor drains and sanitary wastes are discharged to the Veazie Sewer District's (VSD) waste water treatment facility. All floor drain flows pass through an oil/water separator prior to being pumped to the VSD's sewer collection system. The discharge from the VSD facility is also regulated by the Department via MEPDES permit #ME0100707 last issued on October 24, 2002.

Storm Water

As noted, Outfalls 002, 003, and 004 are currently covered under the facilities Multi Sector General Permit (MSGP) last issued by the EPA on October 30, 2000. By obtaining coverage under the combination MEPDES permit/WDL and terminating it's coverage under the MSGP, MIS can combine all discharges under one permit which would simplify management of it's discharges. According to the facilities current storm water pollution prevention plan (SWPPP), the MIS is part of a 47 acre drainage area which is mostly wooded and gently sloping and discharges runoff generally toward an existing conveyance channel on the southwest property boundary and then southerly to the Penobscot River. The MIS station is located on a 29.5 acre parcel, where the station occupies approximately 9.1 acres. The fenced area of the project is approximately 5.2 acres.

The site stormwater has two general components. One component intercepts stormwater from the upper portions of the drainage basin, controls and conveys it through the site to the existing drainage channels on the westerly boundary of the project. The second component of the stormwater management system is the detailed network of culverts and catch basins that convey stormwater from and through the power plant area to the existing drainage channels on the southern boundary of the project. Surface water is collected by the subsurface drainage system along the north and south sides of the turbine-generator building and directed east to the main collection line, which runs north to south. Runoff from the turbine building roof is collected and routed to catch basins along the perimeter of the building. The main stormwater collection line then runs south and west to the sedimentation basin and then to the existing drainage channels along the southern boundary of the project to Outfall 002.

There are three stormwater outfalls and one process water outfall along the Penobscot River for the MIS site, as shown on the site plan located in Attachment A of this Fact Sheet. Drainage patterns for the facility as well as chemical and equipment locations are illustrated on the site plan. Virtually all of the MIS project stormwater is directed through stormwater Outfall 002, which is the existing channel along the westerly boundary of the project. This Outfall 002 receives the stormwater that is collected from

3. PERMIT SUMMARY (cont'd)

Storm water

and routed through the MIS project site, as well as runoff from the VSD waste water treatment facility, located to the west of the project. Site areas from which storm water is drained, directions of flow, outfall points and types of pollutants that could potentially be present in storm water runoff from these areas are given in Table 1 below.

Erosion control measures have been implemented where necessary to maintain stabilization of soil surfaces at the MIS. Control measures include use of grassing, erosion control fabrics and gravel or pavement stabilization of otherwise erodible surfaces.

Materials other than exposed soil that could contaminate site runoff, such as water treatment chemicals, lubricants, cleaning preparations, etc. are stored in the MIS warehouse or other inside storage to protect them from precipitation and prevent their entry into MIS storm water drainage. No such materials are stored in locations or conditions that would expose them to precipitation, flooding or erosion.

Table 1 - Source Areas for Storm Water Runoff, Directions of Flow and Potential Pollutants

Outfall No.	Area	Direction of Flow	Potential Pollutants
2	Developed Area of Site: Turbine Building, Admin. Building and Warehouse area, tank farms and containments. Also includes portion of Admin. Building parking lot and access road.	Graded surface and roof drains leading to catch basins that drain to buried pipes along perimeter of power block and carry storm runoff to detention pond south of site.	Oil and grease, TSS, miscellaneous chemicals including: detergents, water treatment chemicals, etc. Incidental wind-blown mist from cooling tower.
3	Portion of Admin. Building parking lot and area immediately east of Bangor Hydro facility.	By natural surface drainage south and then east (across Shore Rd.) to the Penobscot River.	Oil and grease from parking lot and TSS from soil materials. Incidental wind-blown mist from cooling tower.
4	Undeveloped areas north of the site and portion of Shore Road.	By natural surface drainage south and then east (across Shore Rd.) to the Penobscot River.	TSS from soil materials. Incidental wind-blown mist from cooling tower.

It is that noted the permittee is proposing to store a pile of sand/salt mixture on-site for winter sanding purposes. The pile will be covered to minimize exposure to precipitation and will be maintained at less than 100 cubic yards at all times to qualify for an exemption to the requirements of Department rule Chapter 574, *Siting And Operation Of Road Salt and Sand-Salt Storage Areas.*

3. PERMIT SUMMARY (cont'd)

c. Treatment: The cooling towers are mechanical draft wet cooling towers that are operated under induced draft conditions. Make-up water for the cooling towers is disinfected with chlorine to control the growth of slime, bacteria, and other organisms in the circulating water system. The cooling tower blowdown is then dechlorinated prior to discharge to neutralize disinfection chemicals added to the circulating water by injecting sodium bisulfite upstream of a static mixing device in the cooling tower blowdown line.

The demineralized water system regeneration flows are neutralized by collecting the flows in a neutralization tank where they are mixed until the acidic and caustic flows neutralize one another. The pH of the combined flow is close to 7 standard units prior to discharge into the cooling tower basin.

Under normal circumstances, cleaning of the heat recovery steam generators and the cooling tower will occur once every 5 to 6 years during major equipment outages. The chemical metal cleaning wastes generated when cleaning the heat recovery steam generators are trucked off-site for disposal. Cleaning the cooling tower of solids can be accomplished several ways. The cooling tower is either drained or pumped down until there is a risk of solids being discharged and then the solids are removed for filtering or drying, either on-site or off-site, followed by proper disposal off-site. An alternative method would employ a weir box where the waste water is discharged over a weir and the solids removed from the box for filtering or drying and off-site disposal.

There are two oil/water separators at the MIS facility. The oil/water separator in the water treatment building collects contaminated water from the plant drains and discharges to the sanitary sewer system. The oil/water separator adjacent to HRSG#2 collects storm water from the immediate area and discharges to the storm water collection system and detention pond. Oil/water separators provide a safeguard against off-site discharge of oil from any spill that might occur in the general drainage/working areas.

The oil/water separator removes sediment and floating pollutants (oil) from incoming water. Regular maintenance is required to remove accumulated debris. The oil/water separators will be maintained according to the Operations & Maintenance Manual provided with the separators, and records of inspections and maintenance activities will be kept in the facility's SWPPP.

4. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

5. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 467(7)(A)(6) classifies the Penobscot River at the point of discharge as a Class B waterway. Maine law, 38 M.R.S.A., Section 465(3) describes the classification standards for Class B waterways.

6. RECEIVING WATER QUALITY CONDITIONS

A table entitled, *Category 4-B1: Rivers and Streams Impaired By Pollutants, Pollution Control Requirements Reasonably Expected To Result in Attainment*, in a document entitled 2002 Integrated Water Quality Monitoring And Assessment Report, (referred to as the 305b Report) published by the Department states that a 10.1-mile segment of the Penobscot River from the Veazie Dam to Reed Brook (assessment unit ME0102000513, segment ID 234R02) is not attaining the fish consumption standard of its assigned classification due to the presence of dioxin and mercury in fish tissue. It is noted that all fresh water bodies in Maine carry a fish advisory for mercury due to atmospheric transport and deposition.

The formation and discharge of dioxin and dioxin like compounds have been associated with historic practice of bleaching pulp with elemental chlorine. This practice has been replaced by modifying the bleaching sequence at pulp mills such that the chlorine dioxide is now used which has eliminated the discharge of detectable quantities of dioxin. The Department has no information nor does it suspect that dioxin or dioxin like compounds are being discharged via waste water streams regulated by this permit.

The Department issued a draft report entitled, Penobscot River Modeling Report, March 2003, that outlined the results of a water quality study conducted during the summers of 1997 and 2001, on the Penobscot River main stem ranging from Millinocket to Bucksport (103 miles). The Department identified 51 miles of the river (all classified as Class B) as in non-attainment of the Class B dissolved oxygen standards due to the point source discharges of biochemical oxygen demand (BOD) and phosphorus as being the primary cause of the non-attainment.

6. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The report recommends significant reductions in permit limits for BOD and a reduction in the quantity of phosphorus currently being discharged to meet water quality standards for dissolved oxygen established in state law. It is noted the CBEC facility has not been identified as a discharger that is causing or contributing to any of the impairment issues cited above.

The Department is scheduled to perform a comprehensive evaluation of the data collected and calibrate an existing model of the river in calendar year 2006 and if necessary, prepare a total maximum daily load (TMDL) for segments of the river not attaining the standards of their assigned classification(s). If the evaluation and modeling runs determine that at full permitted discharge limits the discharge from the CBEC facility is causing or contributing to the non-attainment, this permit will be re-opened per Special Condition I, *Reopening of Permit For Modifications*, to impose more stringent limitations to meet water quality standards.

7. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

The effluent limits in this permit modification are based on the effluent guidelines published in the Code of Federal Regulations (CFR), 40 CFR Part 423 – Steam Electric Power Generating Point Source Category, New Source Performance Standards (NSPS). The NSPS guidelines listed in 40 CFR §423.15 that apply for the facility are:

40 CFR §423.15(b):	Requires no discharge of PCBs
40 CFR §423.15(c):	Limits TSS, oil & grease from low volume waste sources. It is noted 40 CFR §423.11(b) defines low volume waste sources included but are not limited to: waste waters from wet scrubbers air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes and re-circulating house service water systems.
40 CFR §423.15(j)(1):	Limits free available chlorine, and use of the 126 Priority Pollutants (Appendix A) in cooling tower water blowdown

This permitting action is establishing monthly average and daily maximum mass and or concentration limits where applicable.

7. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Power Plant – Outfall #001B

a. Flow: The previous licensing action established a daily maximum limitation of 1.96 MGD that is being carried forward in this permitting action. In addition to the flow limit of 1.96 MGD, the Department considered establishing another tier of 1.43 MGD, that did not include 0.53 MGD of sand filter backwash that has never been realized because the sand filter has not been constructed to date. However, after further review and evaluation of calculations for establishing limitations in the permit, it was determined the reduction in the flow limit had little if any affect on limitations and was therefore disregarded. A summary of the monthly Discharge Monitoring Report (DMR) data for the period 12/00 - 9/05 indicates the facility has operated in the range of 0.132 MGD to 0.827 MGD with an arithmetic daily maximum flow of 0.38 MGD.

b. Dilution Factors: Dilution factors associated with the discharge from the CBEC facility were derived in accordance with freshwater protocols established in Department Rule Chapter 530, *Surface Water Toxics Control Program*, November 2005. With a daily maximum permit flow limit of 1.96 MGD, dilution calculations are as follows:

Acute: ¼1Q10[(1)] = 718 cfs ⇒ $\frac{(718\ \text{cfs})(0.6464)}{1.96\ \text{MGD}} = 237{:}1$

Acute: 1Q10 = 2,871 cfs ⇒ $\frac{(2{,}871\ \text{cfs})(0.6464)}{1.96\ \text{MGD}} = 947{:}1$

Chronic: 7Q10 = 3,183 cfs ⇒ $\frac{(3{,}183\ \text{cfs})(0.6464)}{1.96\ \text{MGD}} = 1{,}050{:}1$

Harmonic Mean: 8,810 cfs ⇒ $\frac{(8{,}810\ \text{cfs})(0.6464)}{1.96\ \text{MGD}} = 2{,}906{:}1$

Footnotes:

It is noted the 1Q10 and 7Q10 river flow values are approximately 11% lower than the previous permitting action based on a re-evaluate of the long term flow data for the Penobscot River.

(1)The Department has made a best professional judgement determination that ¼1Q10 is applicable to this discharge pursuant to the criteria established in Department rule Chapter 530 §(4)(2)(B)(1). More specifically, the Department has determined that based on the configuration of the outfall weir structure, the discharge does not receive rapid and complete mixing with the receiving water. Therefore, the default position in the rule is that ¼1Q10 is applicable. The Department is receptive to the permittee providing additional information as to the mixing characteristics in the receiving water that would warrant a receiving water flow greater than ¼1Q10 in the acute dilution factor calculation.

7. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Power Plant – Outfall #001B

c. Temperature: The previous permitting established a daily maximum temperature limit of 100°F that is being carried forward in this permitting action. The DMR data for the period 12/00 - 9/05 indicates the facility has operated during the summer months (June – September), the most critical time for impacts to the receiving waters, ranging from 85°F to 90°F with a mean daily maximum of 87°F.

d. Free Available Chlorine (FAC): The previous licensing action erroneously established technology based monthly average and daily maximum concentration limits of 0.2 mg/L and 0.5 mg/L respectively, for total residual oxidants (TRO) pursuant to federal regulation, 40 CFR, §423.15(h)(l). The technology based limitations were correct but the parameter and regulation citation were incorrect. Limits in 40 CFR, §423.15(h)(l). are specified for disinfection chemicals associated with non-contact cooling water which is discharged from the MIS facility. The correct parameter is free available chlorine and the correct citation is 40 CFR, §423.15(j)(l) which limits chlorine based compounds for discharges associated with cooling tower blowdown.. A review of the DMR data for the period 12/00 - 9/05 indicates the facility has consistently reported 0.0 mg/L of TRO with the exception of October of 2000 due to the dechlorination efforts. No mass limitations are being established due to the nature of the pollutants. This permitting action is reducing the monitoring frequency for FAC from 1/Week to 1.Month given the long history of compliance with technology based concentration limits and the available dilution to protect against any toxic effects of the discharge of FAC.

e. Total Suspended Solids (TSS): The previous permitting action established technology based monthly average and daily maximum concentration limits of 30 mg/L and 100 mg/L respectively, pursuant to federal regulation, 40 CFR, §423.15(c). The limits are being carried forward in this permitting action. The limits were established for the low volume waste sources (sand filter backwash and ion-exchange regeneration waters). The previous permitting action also establishing monthly average and daily maximum mass limits of 137 lbs/day and 457 lbs/day respectively are being carried forward in this permit. The mass limits are based on the total daily maximum flow limit of 0.548 MGD (0.53 MGD + 0.018 MGD) for the low volume waste streams established in the previous permitting action and the applicable concentrations. However, this permitting action (and the previous permitting action) requires testing for TSS on the cooling tower and boiler blowdown waste stream being that all waste streams are being regulated under one outfall. A review of the DMR data for the period 12/00 – 9/05 indicates the daily maximum concentrations and mass discharged ranges from <5 mg/L - 28 mg/L with an arithmetic mean of 13 mg/L and <8.4 lbs/day - 101 lbs/day with an arithmetic mean of 53 lbs/day respectively. The monthly average concentrations discharged ranges from 5 mg/L – 26.5 mg/L with an arithmetic mean of 7 mg/L and 3 lbs/day – 26.1 bs/day with an arithmetic mean of 11 lbs/day respectively.

7. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Power Plant – Outfall #001B

f. Zinc (Total): The previous permitting action established a technology based daily maximum concentration limit of 1.0 mg/L pursuant to 40 CFR, 423.15(j)(l) and a daily maximum mass limit of 12 lbs/day that are being carried forward in this permitting action. The mass limitation was derived using a daily maximum cooling tower/boiler blowdown flow of 1.41 MGD and a concentration limit of 1.0 mg/L. A review of the daily maximum concentration and mass data reported on the DMRs for the period 12/00 – 9/05 indicates the zinc being discharged has ranged from 0.02 mg/L to 0.08 mg/L for concentration and ranged from 0.07 lbs/day – 0.21 lbs/day for mass.

g. Oil & Grease - The previous permitting action established technology based monthly average and daily maximum concentration limits of 15 mg/L and 20 mg/L respectively, pursuant to 40 CFR, 423.15(c). The concentration limits are being carried forward in this permitting action. The limits were established for the low volume waste sources that include floor drains. No mass limits are being established in this permitting action due to the nature of the pollutant. A review of the DMR data for the period 3/02 – 9/05 indicates the discharge of oil & grease has been consistently reported as <5 mg/L as both monthly average and daily maximums. However, this a period of time between 9/04 and 3/05 where three quarterly sampling events that indicate oil & grease levels at 4.6 – 10 mg/L. The permittee and Department concur that there were laboratory QA/QC problems associated with reported values. Testing since this time frame indicate monthly average and daily maximum levels remain at <5 mg/L.

h. Chromium (Total) - The previous permitting action established a technology based daily maximum concentration limit of 0.2 mg/L based on federal regulation 40 CFR, 423.15(j)(l) that is being carried forward in this permitting action. The previous permitting action also established a daily maximum mass limit of 1.04 lbs/day. Both limitations are being carried forward in this permitting action.

It is noted, the Fact Sheet for the previous permitting action contained the following text: *The Fact Sheet for the 8/25/98 NPDES permit indicates the limits were based on CBEC's calculations of projected leaching of chromium from the pressure treated wood used to construct the cooling tower after the first year of operation of the cooling tower. The projected loadings were established as daily maximum limits in the NPDES permit and State WDL based on an EPA/Department best professional judgment. A mass balance calculation using a cooling tower/boiler blowdown flow of 1.41 MGD and a concentration limit of 0.2 mg/L yields a mass of 2.4 lbs/day. However, antibacksliding provisions found in federal regulation at 40 CFR 122.44(l) prohibited the Department in the previous permitting action (12/13/01) from reissuing a permit with less stringent limitations than the previous license/permit. Therefore, the daily maximum mass limit of 1.04 lbs/day is being carried forward in this permitting action.*